Infectious Disease Epidemiology Report

Community-associated MRSA, 2004-05

Background

The Infectious Disease Epidemiology program monitors the incidence of community-associated methicillin resistant *Staphylococcus aureus* (CA MRSA) in Maine through mandatory reporting of suspect cases by public health partners. This report summarizes surveillance data on cases of CA MRSA reported during February 2004 to August 2005.

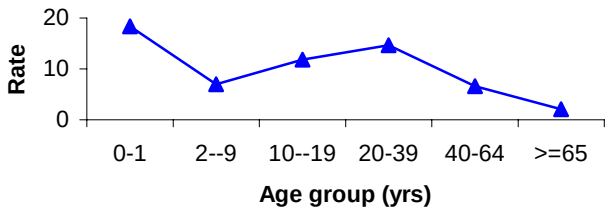
Methods

CA MRSA was defined as isolation of MRSA in a person with (1) no medical history in the past year of hospitalization; admission to a long-term care facility, skilled nursing facility, or hospice; surgery, or dialysis; and (2) no permanent indwelling medical device that passes through the skin into the body. Reports of suspected CA MRSA were investigated during February 1, 2004 to August 31, 2005. Standardized case report forms were completed for confirmed cases. Clinical laboratories reported MRSA antibiotic susceptibilities. Rates of CA MRSA were calculated using an annualized incidence and 2000 U.S. Bureau of Census population counts.

Results

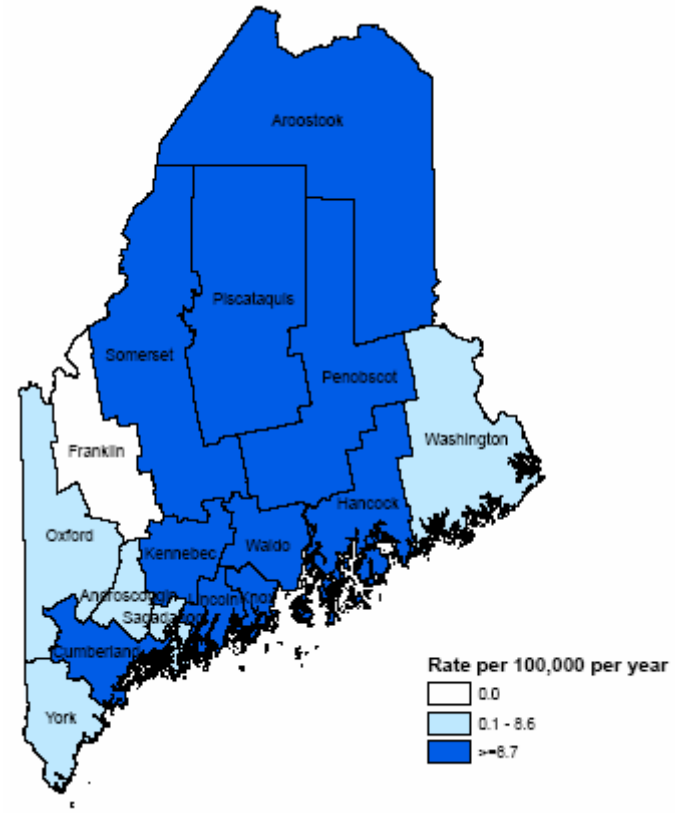
During 2004-05, an annual average of 111 cases of CA MRSA were reported, with an incidence rate of 8.6 cases per 100,000 population. Fifty-seven percent of cases were male. Of the 68 cases for whom race information was available, 94% were White. The incidence of CA MRSA varied by age (Figure 1) and county (Figure 2).

Figure 1: CA MRSA by age* – Maine, 2004-05



* Cases per 100,000 population per year

Figure 2: CA MRSA by county – Maine, 2004-05



The majority of cases were identified in an outpatient setting as skin and soft tissue infections (SSTI) (Table 1). Nineteen percent of CA-MRSA cases lived in a correctional facility or shelter prior to infection, and 15% had contact with persons with a similar infection.

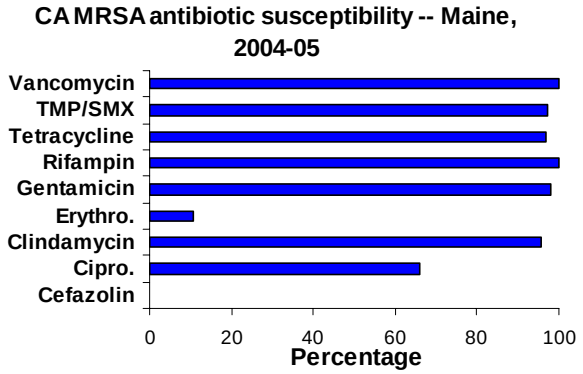
Table 1: CA MRSA by selected characteristics – Maine, 2004-05

Characteristic		%
Location of diagnosis	Hospital	25
	Outpatient facility	41
	Other	27
Site of infection	Blood	1
	Sputum	2
	Skin/soft tissue	93
Risk factor	Lived in correctional facility/shelter	19
	Contact sports	2
	Contact with person with similar infection	15

Antibiotic susceptibility results were available on 159 cases; selected antibiotics were tested on a

minimum of 21 isolates. For those isolates tested for rifampin and vancomycin susceptibility, all were susceptible. More than 90% of isolates tested for clindamycin, gentamicin, tetracycline, and trimethoprim-sulfamethoxazole (TMP/SMX) were susceptible (Figure 3). Rifampin should not be used as a single agent to treat MRSA infections.

Figure 3: CA MRSA antibiotic susceptibility – Maine 2004-05



During 2004-05, four clusters of approximately 26 MRSA skin infections were identified. The final sources of infection were not determined, though risks factors included sharing of personal items, assisting in changing of wound dressings, and tattooing. Education and control measures implemented included:

- Screening and medical evaluation of possible cases
- Daily showers with antibacterial soaps
- Frequent hand washing by making available liquid soap and hand sanitizer
- Cleaning clothing and towels with hot water heated to 160 degrees and hot drying
- Environmental cleaning with disinfectants effective against *Staphylococcus aureus*, as stated on label

Discussion

The data presented here represent only those cases reported to the state, and are assumed to be an under estimate of the actual prevalence of MRSA in the community. However, the findings are consistent with the epidemiology of CA MRSA nationwide.

As an infection commonly found in the community and transmitted through household or personal contacts, providers and patients should be informed of strategies to manage and prevent MRSA infections.

A high index of suspicion for MRSA is needed when managing skin and soft tissue infections. Risk factors for CA MRSA are different from those associated with healthcare related infections, and as a result wound cultures and antimicrobial susceptibility testing play an important role in managing SSTI. Maine has adopted guidelines developed for evaluation and management of CA MRSA infections in outpatient settings, available at http://www.maine.gov/dhhs/boh/methicillin-resistant_staphylococcus_aureus.htm or upon request.

Following infection control measures (Table 2) can reduce the transmission of MRSA.

Table 2: Measures to reduce MRSA transmission

1. **Appropriate wound care**: Cover wounds with clean, dry bandages
2. **Hand hygiene**: Wash hands frequently with soap and warm water, especially after contact with patient's bandage or wound
3. **Clean environment**: Use disinfectant effective against *Staphylococcus aureus*
4. **Avoid sharing personal items**: Towels, washcloths, razors, and clothing should not be shared
5. **Inform a healthcare provider**: Tell your healthcare provider if you had contact with someone with MRSA
6. **Avoid contact with others**: Avoid contact sports and other skin-to-skin contact until your infection has healed

The Infectious Disease Epidemiology program will continue to monitor CA MRSA infections in Maine. Health care providers are encouraged to report cases of CA MRSA, particularly when invasive infections are present or outbreaks are suspected. Since September 2005, epidemiologists investigate cases of invasive disease and outbreaks and provide consultation on MRSA infections.

Contact the Division of Infectious Disease at 1-800-821-5821 to report cases or outbreaks of CA MRSA or for more information.

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